

University of Azores
Genetic Resources group

Letter of intention

The genetic resources group is part of a research centre for natural resources in Azores (P) with potential in biotechnology. The archipelago of Azores in the dorsal middle Atlantic is formed by nine volcanic islands rich in terrestrial volcanic secondary events and shallow marine vents,. These locations present a multiplicity of extreme environments where a high microbial diversity has been observed; even though being almost unexplored for biotechnology proposes. These motivate the interest of the research group in studying potential applications of such microorganisms. The group is involved in projects with extremophiles for projects such as:

- 1) The selection of microbial consortia to use in pre-treatments of municipal and dairy wastes to supply local biogas plants;
- 2) The selection of bacterial isolates for the production of enzymes (proteases, amylases, chitinases, keratinases and lipases) with potential applications in industry, cosmetics, etc.;
- 3) The selection of bacterial isolates producing antimicrobial and insecticidal compounds;
- 4) The isolation of Archaea to extract ether lipids for application in biotechnology.

Moreover, the team is committed to the establishment of culture collections, in which more than 3000 isolates are preserved so far.

The group has experience in sampling, enrichment, isolation, screening for specific activities, and preservation of microorganisms. Part of the bacteria that the group is sampling grows in waters with high concentration of mineral and belongs to known bacterial groups with potential for biomining and bioremediation.

The research group is looking for European academic and industrial organizations partners and proposes to participate in a task of screening for microorganism with potential application in any of the domains in the frame of ERA MIN by using the existing collections and / or by sampling and screening for new microorganisms with the desired activities.

Contact – Nelson Simões, Prof.

Departamento de Biologia, Universidade dos Açores

Rua da Mãe de Deus, 950-801 Ponta Delgada. Portugal

(351) 296 650 119

simões@uac.pt